

esting paper, which is illustrated by six beautiful plates, with a notice of *Sarsia rosaria*, probably from a *Syneoryne* abounding on the piers of a wharf, and with notes also on a Campanularian, on *Willia*, *Athyria*, and *Verella*.

W. C. M.

*Chemical Researches on the Fossil Tests of Foraminifera, Mollusca, and Crustacea.* By M. SEANISLAS MEUNIER.

M. de Folin having obtained a flocculent residue by the treatment of Nummulitic rocks from Biarritz with acids, came to the conclusion that this was of organic nature, and regarded it as *sarcoidic material*. He called the author's attention to the subject, who carefully repeated the experiments upon Nummulitic rocks from the neighbourhood of Paris. Examples of *Nummulites levigatus* were partially dissolved in dilute hydrochloric acid until they were quite cleared and milk-white; they were then dissolved in fresh acid, and the residue, amounting to 2.233 per cent. of the Nummulites, was examined.

This residue had the appearance of very fine clay, but on heating to redness some portions on platinum foil they became brown, then carbonized, and after combustion left a reddish residue. On heating the substance in a tube with some soda-lime a strong evolution of ammonia took place. It is therefore a nitrogenous substance.

This supposed animal substance, however, forms only 16.66 per cent. of the flocculent mass, and the mineral material associated with it renders analysis difficult. The results of analysis, given with some reserve, are as follows:—

Carbon .....	64
Hydrogen .....	5
Nitrogen .....	12
Oxygen (difference).....	19

100

The author has repeated the experiments with similar results in the case of other French Foraminiferous rocks.

By the advice of M. Milne-Edwards he extended his researches to the fossilized tests of various Mollusca and Crustacea, among which he cites *Psammodarcinus Hericarti* and *Cythercea splendida*, and in all cases obtained the organic compound with the same composition and properties. As in the case of the Nummulites the substance is light grey, with a peculiar silky lustre, and it is mixed with a very considerable amount of mineral elements, consisting especially of small acicular crystals of carbonate of lime.

The author believes that in the organic compounds obtained we have a residue of the fossil animals which may be compared with the carbonaceous combustibles of vegetable origin, and that it is to their presence that we must ascribe the discovery of nitrogen so frequently repeated by Delesse in his analyses of sedimentary rocks.

—*Comptes Rendus*, March 17, 1890, p. 597.